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THE AMERICAN BEE JOURNAL

OLDEST BEE PAPER IN AMERICA

GEORGE W. YORK,
Editor.

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TO BEE-CULTURE.

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NO. 4.



Mr. E. Kretchmer, of Red Oak, Iowa, has been appointed to take charge of the World's Fair apilary exhibit from the State of Iowa. For the exhibit in the Iowa building it is desired to purchase some choice white comb honey, and he would like to hear from any Iowa bee-keeper that has such; or any Iowa bee-keeper that desires to place choice specimens into the Iowa exhibit, may, if he desires, place his name thereon, as an advertising medium. Mr. K. would like to get the name and address of every bee-keeper in the State, to whom a circular, giving further information, will be mailed. Let Iowa bee-keepers respond promptly.

The California State Bee-Keepers' Association meets at the Chamber of Commerce, in Los Angeles, on Tuesday and Wednesday, Feb. 7th and 8th, 1893. The following is the interesting list of subjects to be considered:

Can We Develop New and Better Methods for the Sale of Our Honey—J. H. Martin.

Bees vs. Fruit—R. Touchton.

Chemical Composition of Honey and its Adulteration with Glucose and Cane Sugar—Geo. W. Brodbeck.

Reminiscences of California Bee-Keeping—R. Wilkin.

How Shall We Make Our Short Honey Seasons Profitable?—M. D. Mendleson.

Economy in Bee-Keeping—T. F. Arundell.

The evening session of the first day will close with a general social buzz, including vocal and instrumental music.

Birds and Insects that are Injurious to Bees and Fruit.—H. E. Wilder.

Rise and Progress of California Bee-Keeping, and the Aid it Should Receive from the State University—W. A. Pryal.

Honey-Plants of Southern California—L. T. Rowley.

San Francisco Honey-Markets—Wm. Styan.

The railroads will make their usual reduction, and all wishing to avail themselves of lower rates should address the Secretary at once for rebate certificates.

Redlands, Calif. J. H. MARTIN, Sec.

Hon. Geo. E. Hilton, who is one of Michigan's State representatives, wrote us on Jan. 13, 1893, that the Rules were suspended the day before, and a Bill passed granting an additional \$50,000 for the purpose of making a creditable exhibit at the World's Columbian Exposition. The Bill takes immediate effect. Agricultural exhibits get \$17,000 of this, and the bee-keeping department expects \$1,000, which will enable them to make a creditable display. Mr. Hilton, we are glad to learn, has been appointed chairman of the important committee on "Roads and Bridges." Good for Michigan!

R. A. Burnett & Co., is the new firm name explained in the following letter:

FRIEND YORK:—I take pleasure in informing you that on the below date I took into partnership two faithful employees, who thereby become the company of R. A. Burnett & Co., which shall, until farther notice, be the style of the firm.

Asking for a continuance to the firm of the favors you have shown me during the past 17 years, I am,

Very truly yours,

R. A. BURNETT.

Chicago, Ills., Jan. 3, 1893.

As heretofore, the above firm will continue to deal in all kinds of farm produce, including honey and beeswax. They are represented in our market quotations on another page.

Freight Rates on Honey.—

Our friend, and also the great friend of all honest honey-producers, Mr. Chas. F. Muth, of Cincinnati, O., writes us as follows on the subject of freight rates on extracted honey:

FRIEND YORK:—The very exorbitant freight rates on honey have been a serious stumbling-block to dealers and bee-keepers. It was a source of general dissatisfaction that freight on extracted honey should be from 40 to 50 per cent. higher than on molasses or syrup, the consistency, weight, nature of packages and value being about the same. We have written many letters to freight agents, the Inter-State Commerce Commission, and others, but the only result obtained was that Gen. McLeod, freight agent of the C. H. & D. R. R., told us to ship our honey as "syrup," and they would rate it as "syrup." The C. H. & D. did it, but other roads did not; and one time when the Big 4 railroad had spilled a barrel of honey for us, and we made our claim for damages, the agent told us that our claim was not valid, having shipped the honey under a wrong name, etc.

Since the Ohio State Bee-Keepers' meeting of a year ago, I have endeavored to interest, for our benefit, the Commissioner of the Freight Bureau of our Chamber of Commerce. Mr. Wilson is a prompt man, and he informed me on Dec. 14, 1892, that the classification has been made, and that the new issue

will be promulgated without delay. So honey will hereafter be rated the same as syrup. This is good news, and well for our bee-keepers to know.

Yours truly,

CHAS. F. MUTH.

Friend Muth has thus added another "star" for the "crown of honor" which he has won in working for the interest of bee-keepers. Finally, through his efforts, justice in the rating of extracted honey, when shipping the same, has been obtained. There never was any reasonable reason why such honey should be classed higher by railroad companies than was syrup. We are indeed glad to publish Friend Muth's success in thus securing for producers of liquid honey what they long have desired. We doubt not that bee-keepers will be very grateful for this knowledge, and the saving to them in freight charges that will now result therefrom.

Bee-Supply Dealers should now begin their advertising for the season—let would-be customers know *where* you are, and *what* you have for sale. Write us for estimates, or consult our advertising rates published on the second page of each copy of the BEE JOURNAL.

One of our best advertisers has just said that this is "the only independent bee-paper in the United States"—we presume because it is *not* interested in the sale of bee-keepers' supplies. Try an advertisement in it now, if you have never used its columns before. Those who have advertised in the BEE JOURNAL know its value without trying—they keep an advertisement running the greater part of the year, if not all the time.

The Ninth Annual Meeting of the Wisconsin State Bee-Keepers' Association will be held at the Capitol, at Madison, on Feb. 8th and 9th, 1893. C. A. Hatch, of Ithaca, is President; H. Lathrop, of Browntown, Recording Secretary; and Dr. J. W. Vance, of Madison, Corresponding Secretary.

**DR. C. C. MILLER.**

We are glad to have the opportunity this week to give to our readers the

from getting to this interesting story of his life (which is so kindly furnished by his sister-in-law, Miss Wilson, who is a member of the Doctor's family), we here present it:

Dr. C. C. Miller was born June 10, 1831, at Ligonier, a small village in Western Pennsylvania. At the age of 12 he commenced work in a little country store at Laughlinstown, three miles from home. He worked there two years, getting \$24 for the first year, and \$50 for the second, his washing being done at home.

From there he went into the office of the principal physician of Ligonier,

**DR. C. C. MILLER.**

picture and biographical sketch of one whose practical and entertaining writings are so well-known to bee-keepers all over the world. The more we have come to know Dr. Miller and his life, the more we have loved him.

At the recent convention of the North American Bee-Keepers' Association he was elected for the second time as its President, having served in that honored position in 1886-87.

Not desiring to keep the reader longer

nominally to study medicine, but really as an office boy. After being there for some time, the big words in the medical books he was reading made him decide he needed a better education, and he was allowed to go to school part of the time, working the rest of the time in the office. But this did not satisfy him, and he made up his mind that for a time he must give up the study of medicine, much against the physician's wishes, who told him he never would amount to anything if he was so changeable. He hated to lose his office boy. But he did lose him, for with his usual push the

young man worked his way through school and college, graduating at Union College, Schenectady, N. Y., at the age of 22. He commenced his junior year with a little more than \$26, and graduated with some \$70 surplus, after paying all expenses. His fear of debt made him take every opportunity that presented itself for earning money, by ornamental penmanship, teaching classes in mathematics and singing, working in cornfield or garden at 7½ cents an hour, and other ways. In spite of time taken up in this way, he kept the highest standing attainable in his class.

I have before me his old account book, where all accounts of college days were carefully kept, and have been looking it over with no small interest. I have just run over accounts for five weeks, and find that it cost him precisely 32½ cents per week to live. At other times he was more extravagant, as at one place I found the cost 60 cents per week! He boarded himself and did the cooking. In fact, he took boarders, as he boarded his chum for some time at 50 cents per week, though he tells me that his boarder rebelled at one time when he had beef suet in place of butter.

Rice and wheat seemed to have been the chief articles of diet, and the Doctor assures me that a half bushel of wheat boiled goes a long ways. However, I don't believe he would advise others to follow his example, as he paid for it afterward with poor health.

As soon as he graduated at Union, he commenced the study of medicine in earnest at Johnstown, Pa., graduating at the University of Michigan, in Ann Arbor, at the age of 25. He settled down to practice, but was compelled to give up at the end of a year on account of poor health. Teaching school and music occupied his time for some years. For two or three years he worked for Messrs. Root & Cady, at that time the leading music house of the West. Afterward, for the Mason & Hamlin Organ Co., at Chicago. The well-known composer, Dr. Geo. F. Root, availed himself of no little of his services, especially when writing his chief work, "The Musical Curriculum." For several years he wrote for the "Song Messenger," over the *non de plume* of "P. Benson, Sr."—"whitch the Sr. it stans for singer."

Dr. Miller also spent about a year as official agent in getting up the first Cincinnati Musical Festival, under Theodore Thomas, in 1873.

In 1876 he turned his back on a salary of \$2,500 a year and all expenses paid, to accept a position as principal

of the Marengo public school at a salary of \$1,200 a year, paying his own expenses. This he did that he might have more time with his bees, and gradually work into bee-keeping as his sole business.

He began bee-keeping in 1861, with a runaway swarm caught by his wife, which was hived in a sugar-barrel. In the fall of 1871 there were 50 colonies placed in the cellar, most of them weak, as he had increased too rapidly. By the first of April there were only 2 colonies left. During all these years up to 1876, he was away from home most of the time, consequently bee-keeping was rather uphill business.

In 1876, when he came home to live with his bees for good, he had 34 colonies. In 1878 he gave up all other business, commencing the season with 154 colonies, a little more than 400 being the largest number ever reached. Of late he prefers to keep a smaller number of colonies, as much of his time is spent in study, writing, and Sunday-school work.

So many bee-periodicals are published now, that it takes no little time to go through them, especially as a number from France and Germany are included.

For a number of years he has been the chief working officer of the County Sunday School Association, and for two years past President of the 2nd State District, including six counties. This involves a large amount of correspondence and attendance at conventions in each county. Aside from the four regular church services which he attends on Sunday, he conducts on that day a normal training class, made up from the different churches of Marengo, when not absent attending township conventions. In fact, he is a very busy man.

As a writer, he is extremely careful not to overstate the facts plain and practical. But, of his qualifications as a writer, I need say but little, as doubtless many of the readers of the AMERICAN BEE JOURNAL are familiar with his "A Year Among the Bees," and frequent contributions to the bee-papers.

Dr. Miller's musical ability, and his grand voice are among the things he ought to thank God for, and I believe he does, for much of that voice is given to the glory of God. At different times he has gone as singing evangelist, and were he able to be away from home, more of his time would be spent in that way.

Of Dr. Miller's home life much might be written. I will simply say he is an earnest Christian, carrying his religion

into his every day life. His jovial, happy manner at conventions is his everyday manner at home. Full of fun himself, he is quick to see the comical side, as his P. Benson writings show. He will always find something of the humorous in the most doleful situations, and a joke is none the less enjoyed because it is on himself.

His ability, and willingness to help, lays much work upon his shoulders, both from our Christian Endeavor Society and the church, for I know that our pastor depends upon him greatly.

He is passionately fond of flowers, and roses are his hobby, of which he has some 300 plants. EMMA WILSON.

Albino Bees.—Among the enquiries we have had about these bees, is the following from Mr. E. B. Ellis, of Cookville, Ills.:

Will you please give, in the AMERICAN BEE JOURNAL, a description of the Albino bees?

1. From whence did they come, and when were they introduced?

2. What are their markings, and in what colors?

3. What are their good qualities, and what their bad ones? E. B. ELLIS.

Mr. A. L. Kildow, who has reared the Albino bees, replies to the above questions thus:

1. It is claimed that they originated in the apiary of D. A. Pike, of Maryland, in the fall of 1873. A queen was reared from a colony of Italian bees, and allowed to remain with that colony until the next spring, when it was found that one-half of her working progeny was mildly marked Italian bees; the other half having white rings or bands. As soon as this was discovered, the breeding out was begun, using the greatest care to get them pure. They were removed to a place where they were not likely to come in contact with other bees, and were kept there until they reproduced themselves with all their distinctive markings; hence the name "Albino" was given.

2. As to their markings, the difference between them and the pure Italian is very striking. About the eyes they approach nearer a purple than that of the Italians. Beginning at the waist, they have three distinct yellow bands, then three distinct white; the white are pure, not muddy and dirty; the wings are

fine, and of a bright silver color. Their shoulders and the under part of the abdomen are very thickly coated with white hair. The queens are large, and of a bright reddish yellow, and generally have the white hair, as described in the workers.

3. They are more gentle than the average Italian, and stick closer to the comb, thus making them easier to handle. They are good defenders of their home, have no superiors in honey-gathering, and are as hardy as the race from which they sprang. The queens are very prolific. As yet I have found no bad qualities in the Albino bees.

A. L. KILDOW.

"Southern California" is the title of a handsome, illustrated pamphlet, giving an account of the resources and interests of that unique section, has been received at this office. It contains some fine work in the way of half-tone engravings, and an excellent map of the section. Any one who is interested in the land of honey, oranges, and olives, and desires a copy of this book, can secure one by writing to the Secretary of the Bureau of Information, Los Angeles, Calif., and enclosing a two-cent postage stamp. The book treats of such subjects as the following: The Semi-Tropic Climate, Methods of Irrigation, Growing of the Orange and Lemon, California Prunes and Olives, the English Walnut, and the Almond, Stock-Raising in California, Beet-Sugar Manufacture, Honey-Production, Etc. It cannot fail to interest all who have ever visited California, or who expect at any time to journey to that interesting country.

"The Winter Problem" in Bee-Keeping is the title of a splendid pamphlet by Mr. G. R. Pierce, of Iowa, a bee-keeper of 26 years' experience. It is 6x9 inches in size, has 76 pages, and is a clear exposition of the conditions essential to success in the winter and spring management of the apiary. Price, postpaid, 50 cents; or given as a premium for getting one new subscriber to the BEE JOURNAL for a year. Clubbed with the BEE JOURNAL one year for \$1.30. Send to us for a copy.

Bro. Alley Wants War, and no "sham fighting" will suit him either. He wants some one to drop a "big bomb" "right down among the bee-keepers!" He thinks bee-keepers are "getting sleepy." May be they are "hibernating," like some other animals do at this time of the year. Just read the following from the December *Apiculturist*, and see what a wide-awake "young man" Bro. Alley is:

Bee-keepers are getting sleepy. Can't some one of the readers of the *Apiculturist* write an article that will awake them? Who will try it? What is wanted is a big bomb dropped right down among the bee-keepers; so charged that when it explodes, the noise will be heard as far west as California, and with force enough in the east, to break window glass in Nova Scotia.

If something isn't done pretty soon, the bee-keeping community will not arouse in season to reap the honey harvest of 1893.

We have had the Punic bee question; the *Apiculturist* has sent out a warning note; yet bee-keepers sleep right along as though nothing has happened. Who will fire the first gun?

Now we, here in the West, don't want to be shaken up. Why, many of the folks haven't got settled yet from the election shock—almost "electric shock." We can't see the use in stirring up folks all the time.

We had taken quite a fancy to Bro. Alley, but if he is going to "fire guns" through his *Apiculturist*, he needn't aim them at folks out this way. We are a peaceable people, and don't care to be frightened out of what few wits we have left. We need them; and if any one is going to "drop bombs" or "fire guns" we just want to know it awhile beforehand, so as to have time to get out of the way.

In 1886, Chicago had a few people that advised, and actually did take to throwing, "bombs" to gain their "end." They got their "end"—but it was at the dangling extremity of a rope. Of course, Bro. Alley means "literary bombs," that would be no more harmful than any average "spit-ball" that little

boys used to throw at the smaller girls in school. Bro. A. wouldn't hurt any one, but he does know how to handle the English language "without gloves"—and, we hope, without "smoke."

Here are a few seasonable *Apt*-thoughts which are also taken from the December issue:

Now that bees are in winter quarters, let them remain so until they commence to carry pollen freely in the spring. It will make little difference what the trouble is with bees in winter, nothing will be gained by overhauling the combs before the colony is fairly wintered through.

The bees should have several cleansing flights before they are meddled with for any purpose in the spring.



CONDUCTED BY

Mrs. Jennie Atchley,
GREENVILLE, TEXAS.

Laying Workers—The Queen's Will and the Sex of the Egg.

Dr. Miller, on page 51, rather takes me to task, and says that tradition says that laying workers are never present until after the colony is hopelessly queenless. Now, Doctor, when tradition or theory is proven wrong, I am willing to lay them aside forever. So in hundreds of instances I have had laying workers present before the brood was all sealed, after the queen was removed, and years ago when I kept Cyprian bees I have had every available queen-cell stub, and some drone-cells, chocked as full of laying-worker eggs as a guinea's nest, in 48 hours after the queen was removed.

Now, Doctor, I do not wish to ever make a statement in regard to a matter like this, until I am perfectly satisfied that I am right. So lay down tradition,

and go to sleep on this matter, as far as I am concerned.

I will admit, that in the majority of cases, laying workers are not present until all hopes of rearing a queen is past. While lots of good old traditions are true and correct, I will agree with Dr. Miller that traditions are not the most reliable things in the world. Such as making a witch mad would cause the cows to give bloody milk; and we must put a horse's shoe in the milk and take it to the supposed witch, by moonshine, to get the witchcraft cured, etc.

Now, right here, in this same article of Dr. Miller's, I feel almost forced to relate some experiments about the sex of the egg, etc., that I was not ready to tell, as I have many experiments under way whose results I wish to relate after awhile. While my examinations under the power of a glass (that makes a nickle look almost as big as wagon-wheel) do not quite agree with Dr. Miller's in regard to the location of the spermatheca, and that the eggs pass from the ovaries through the oviduct in such a manner as to be impregnated, etc., I see nothing in this for us to disagree upon. But, to relate my experience that I speak of is this:

I wish to banish the tradition of mechanical pressure being the means of the sex-changing of the eggs, just like I did the laying worker theory. Now, listen. When this was being discussed a good while ago, I took a gentle old queen that was so full of eggs that she could hardly get her breath, or at least it seemed a misery to her.

Well, I let this queen lay about two dozen eggs on my hand, and I removed them to the combs of a queenless colony, put some in drone-cells, some in worker-cells, and some in queen-cells; and every egg that I got to grow, or that the bees did not destroy, produced worker-bees. Out of the first trial I got three or four workers in drone-cells, and twice as many in worker-cells, and none in the queen-cells. I have tried ten since, and I never have succeeded in getting a queen to lay any but worker-eggs in my hand, or in the cage. I have tried this business until I must say that mechanical pressure may lie down and go to sleep, as far as I am concerned.

Now, I have often thought if bees can change the sex of an egg, why did they not make drone-bees out of the eggs I put into drone-cells? Or did the little things "catch on" to my trick, and fool me, as I know queenless colonies love to rear drones as well as queens?

If I were able, I would quit work one

year and go on to an island (18 miles out in the sea) one mile wide and about twenty long, that I know of, and experiment with drones from laying-workers, and drones from virgin queens, and those from a queen (Italian) mated to a black drone; and drones from a queen (black) that had mated with an Italian drone, and a whole lot of other experiments too numerous to mention. Take them clear beyond dispute of flight, range, etc. I have thought of trying to get help from the Government, or otherwise, for I would just like to settle these points, so they can be answered with a "yes" or "no." But if I quit my regular work it might not be long until soul and body might be holding a conference as to how long they should stay together; that is why I cannot carry out my experiments.

Now, Doctor, to close this article, please permit me to relate a bit of theory, that two Irishmen were said to try to put into practice. They were said to have gone up on the side-hill above a river to cut some rail-timber, and they felled their trees in such a manner that as soon as they cut off a log it would roll down into the river and be lost. Molkey says to Pat, after becoming tired of the state of things, "I have caught on to a plan to stop the logs."

"Well, Molkey, what is it?"

"Faith, and I will get me a rope, Pat, and toy around me body, while you, Pat, cut the log off."

"All right," says Pat, "Good."

And Pat cut it off, and the log started, and Molkey, not being able to hold it—away went the log with poor Molkey; and as he went rolling into the river, Pat hollowed out, "Hold on Molkey, you are on top half of the toime!"

Now, Doctor, don't think I have compared you to Molkey, but far from it. I thought of this joke, and could not withhold it. So you see this was theory that did not work in practice.

Now, I am glad to know that I am in the same boat with as safe a person as Prof. Cook, and while we are out at sea together, I feel he won't let me drown.

And I had confidence in Dr. Miller, to feel safe in his boat, when he and I go out to sea together, until I saw the way he was willing to have Bro. Root "butchered," and himself escape. Now, Prof. Cook, don't you think that Dr. Miller is getting dangerous, anyhow?

Well, I guess Prof. Cook and I will have to acknowledge that Dr. Miller is a head of us at least half of the time.

J. A.



Number of Colonies for Comb and Extracted Honey.

Query 855.—If 75 colonies is the right number for my range when run for extracted honey, how many should I keep if I work them for comb honey?—Nebraska.

100.—JAMES A. GREEN.

Not many more.—M. MAHIN.

75 to 100.—J. H. LARRABEE.

80 to 90.—MRS. L. HARRISON.

The same (75)—JAS. A. STONE.

75. Why not?—G. M. DOOLITTLE.

About 100 colonies.—H. D. CUTTING.

110 to 125 colonies.—JAMES HEDDON.

I would make no difference.—P. H. ELWOOD.

We cannot see any difference.—DADANT & SON.

The same number, if you wish to.—EUGENE SECOR.

I am not sure, but I will venture to say 85 or 90.—J. M. HAMBAUGH.

I don't think it would make any difference about the number of bees.—E. FRANCE.

From 100 to 150—or as many more as you can well take care of.—WILL M. BARNUM.

If for the former you have combs, and for the latter foundation, I should guess you might keep 100 or 110.—R. L. TAYLOR.

Theory says 25 per cent. more, but here in Nebraska we are more sure of such matters after making a test of it.—MRS. J. N. HEATER.

I see no reason why there should be any difference. But I cannot find room here to discuss a matter of so much breadth.—G. W. DEMAREE.

I don't see any reason why more or less than this number should be kept. That is to say, I don't think it makes any difference whether extracted or comb honey surplus is being worked for.—J. E. POND.

I do not think it makes much difference whether run for comb or extracted honey. My theory is that the bees will gather about the same, the difference in yield being consumed in comb building.—C. H. DIBBERN.

I can only state my belief in answer to this query, and that is that I think that 75 colonies run for comb honey would be capable of carrying in just as much nectar as the same number of colonies run for extracted honey.—G. L. TINKER.

I don't think any one can tell what is the right number for his range, as the whole thing is controlled by the season. In some seasons one colony might be too many—and in another season 100 might not be too many.—J. P. H. BROWN.

You've struck new ground, but between you and me, I don't know. I'll only venture this much, that if each colony stores 50 per cent. more extracted than comb, you will not need 50 per cent. more pasture for extracted.—C. C. MILLER.

The point is to keep as many as will secure the best returns. This considers convenience or nearness, and amount of honey. If 75 is the number for extracted, I think it is for comb. I see no reason for a difference. The honey to build comb is still honey.—A. J. COOK.

Try them with the same number. You might guess some year that you could run a greater number for comb than for extracted, but unless there is more uniformity of seasons in your locality than there has been in mine, you will have to guess anew every season.—S. I. FREEBORN.

I think the number of colonies should be about the same, while you would not get as many pounds of comb honey, but the bees would need about the same range, as they would use more honey in comb building. Possibly you might profitably work 100 for comb honey on the same range you worked the 75, but there is nothing certain about this unless you are on an island, as bees may go farther some seasons than others.—MRS. JENNIE ATCHLEY.



Report of the North American Bee-Keepers' Convention.

Written for the American Bee Journal
BY W. Z. HUTCHINSON.

(Continued from page 79.)

Dr. C. C. Miller, of Marengo, Ills., was down on the programme for an essay on "The Grading of Honey." He wrote the Secretary that he had nothing better to offer than the article that he contributed to *Gleanings* last June; and he asked the Secretary to read the article, which appears on page 454 of *Gleanings* for June 15th. It reads as follows:

The Grading of Honey.

Although exceedingly anxious that before the convention at Washington, some system of gradings should be offered that would be so nearly acceptable to all as to meet general acceptance, yet I shrink from any attempt at formulating such a system. The plain truth is, I don't feel that I know enough for such a task. Yet I have made the attempt to do as requested.

I cannot apologize for the system I offer by saying it is hastily thrown together. It is nothing of the kind. It has been the subject of much care, and the hardest thought I am capable of giving. There is nothing original about it except the string that ties it together. It is a mosaic, made up from all the systems that have been offered, modified somewhat by the discussions I have heard and read. If freely criticised in the right spirit, it is possible that something may be made out of it that shall be satisfactory, even if it be so modified as a result of the criticism that nothing of the original draft can be recognized. But here is the system, having four grades, depending on appearance or condition independent of the source of honey, and four classes of honey:

Fancy.—Combs straight, white, well filled, firmly fastened to wood on all four sides; all cells sealed; no pollen, propolis, nor travel-stain.

No. 1.—Wood well scraped, or entirely free from propolis; one side of the section sealed with white cappings, free from pollen, and having all cells sealed except the line of cells next to the wood; the other side white, or but slightly discolored, with not more than two cells of pollen, and not more than ten cells unsealed beside the line of cells touching the wood; comb fastened to the wood on four sides.

No. 2.—Three-fourths of the total surface must be filled and sealed; wood well scraped of propolis.

No. 3.—Must weigh at least half as much as a full-weight section.

There are the four grades.

For the classes of honey, I would suggest the four already in use, sufficiently understood from the names alone; namely, light, amber, dark, mixed.

You will see that there is nothing new in any of this. It is hardly probable that it will entirely suit any one. It does not suit me. I have not tried to give what would suit any one man, or set of men. I have merely made an attempt to come as nearly as I could to what all might agree upon, each one making some concession for the general good. If some one has something better as a basis to start with, I shall be not only willing, but glad to see this thrown aside and the better taken in its place. But *something* must be taken as a basis. It will not do for each one to offer the system that exactly suits *him*. We'll not get on very fast in that way.

If no better basis is offered than the one I have given, then let each one look it over and see; not what changes must be made to make the plan entirely acceptable, but, rather, let him see what is the least change necessary to make him willing to agree to the system, taking into account what others, as well as himself, may desire.

I see I have made the impression that W. C. Frazier's system suits me better than all the rest. That is hardly true, as will be seen from the system I have attempted; but I like his idea of having a system of grading which does not involve the honey itself, leaving that as a separate classification. Others had the same idea, but did not bring it out so clearly, or, at least, it did not strike me so.

The names of the grades are simple. They are easily understood, both by the producer and consumer. And I don't know why the consumer shouldn't fully understand just what they mean. There will never be a great overstock, I fancy, of honey classed as *fancy*. Perhaps it is drawing the lines rather tightly to say, "All cells sealed." Possibly a certain number of cells next the wood ought to be allowed unsealed. I think very few have been in the habit of sorting out



Number of Colonies for Comb and Extracted Honey.

Query 855.—If 75 colonies is the right number for my range when run for extracted honey, how many should I keep if I work them for comb honey?—Nebraska.

100.—JAMES A. GREEN.

Not many more.—M. MAHIN.

75 to 100.—J. H. LARRABEE.

80 to 90.—MRS. L. HARRISON.

The same (75)—JAS. A. STONE.

75. Why not?—G. M. DOOLITTLE.

About 100 colonies.—H. D. CUTTING.

110 to 125 colonies.—JAMES HEDDON.

I would make no difference.—P. H. ELWOOD.

We cannot see any difference.—DADANT & SON.

The same number, if you wish to.—EUGENE SECOR.

I am not sure, but I will venture to say 85 or 90.—J. M. HAMBAUGH.

I don't think it would make any difference about the number of bees.—E. FRANCE.

From 100 to 150—or as many more as you can well take care of.—WILL M. BARNUM.

If for the former you have combs, and for the latter foundation, I should guess you might keep 100 or 110.—R. L. TAYLOR.

Theory says 25 per cent. more, but here in Nebraska we are more sure of such matters after making a test of it.—MRS. J. N. HEATER.

I see no reason why there should be any difference. But I cannot find room here to discuss a matter of so much breadth.—G. W. DEMAREE.

I don't see any reason why more or less than this number should be kept. That is to say, I don't think it makes any difference whether extracted or comb honey surplus is being worked for.—J. E. POND.

I do not think it makes much difference whether run for comb or extracted honey. My theory is that the bees will gather about the same, the difference in yield being consumed in comb building.—C. H. DIBBERN.

I can only state my belief in answer to this query, and that is that I think that 75 colonies run for comb honey would be capable of carrying in just as much nectar as the same number of colonies run for extracted honey.—G. L. TINKER.

I don't think any one can tell what is the right number for his range, as the whole thing is controlled by the season. In some seasons one colony might be too many—and in another season 100 might not be too many.—J. P. H. BROWN.

You've struck new ground, but between you and me, I don't know. I'll only venture this much, that if each colony stores 50 per cent. more extracted than comb, you will not need 50 per cent. more pasture for extracted.—C. C. MILLER.

The point is to keep as many as will secure the best returns. This considers convenience or nearness, and amount of honey. If 75 is the number for extracted, I think it is for comb. I see no reason for a difference. The honey to build comb is still honey.—A. J. COOK.

Try them with the same number. You might guess some year that you could run a greater number for comb than for extracted, but unless there is more uniformity of seasons in your locality than there has been in mine, you will have to guess anew every season.—S. I. FREEBORN.

I think the number of colonies should be about the same, while you would not get as many pounds of comb honey, but the bees would need about the same range, as they would use more honey in comb building. Possibly you might profitably work 100 for comb honey on the same range you worked the 75, but there is nothing certain about this unless you are on an island, as bees may go farther some seasons than others.—MRS. JENNIE ATCHLEY.



Report of the North American Bee-Keepers' Convention.

Written for the American Bee Journal
BY W. Z. HUTCHINSON.

(Continued from page 79.)

Dr. C. C. Miller, of Marengo, Ills., was down on the programme for an essay on "The Grading of Honey." He wrote the Secretary that he had nothing better to offer than the article that he contributed to *Gleanings* last June; and he asked the Secretary to read the article, which appears on page 454 of *Gleanings* for June 15th. It reads as follows:

The Grading of Honey.

Although exceedingly anxious that before the convention at Washington, some system of grading should be offered that would be so nearly acceptable to all as to meet general acceptance, yet I shrink from any attempt at formulating such a system. The plain truth is, I don't feel that I know enough for such a task. Yet I have made the attempt to do as requested.

I cannot apologize for the system I offer by saying it is hastily thrown together. It is nothing of the kind. It has been the subject of much care, and the hardest thought I am capable of giving. There is nothing original about it except the string that ties it together. It is a mosaic, made up from all the systems that have been offered, modified somewhat by the discussions I have heard and read. If freely criticised in the right spirit, it is possible that something may be made out of it that shall be satisfactory, even if it be so modified as a result of the criticism that nothing of the original draft can be recognized. But here is the system, having four grades, depending on appearance or condition independent of the source of honey, and four classes of honey:

Fancy.—Combs straight, white, well filled, firmly fastened to wood on all four sides; all cells sealed; no pollen, propolis, nor travel-stain.

No. 1.—Wood well scraped, or entirely free from propolis; one side of the section sealed with white cappings, free from pollen, and having all cells sealed except the line of cells next to the wood; the other side white, or but slightly discolored, with not more than two cells of pollen, and not more than ten cells unsealed beside the line of cells touching the wood; comb fastened to the wood on four sides.

No. 2.—Three-fourths of the total surface must be filled and sealed; wood well scraped of propolis.

No. 3.—Must weigh at least half as much as a full-weight section.

There are the four grades.

For the classes of honey, I would suggest the four already in use, sufficiently understood from the names alone; namely, light, amber, dark, mixed.

You will see that there is nothing new in any of this. It is hardly probable that it will entirely suit any one. It does not suit me. I have not tried to give what would suit any one man, or set of men. I have merely made an attempt to come as nearly as I could to what all might agree upon, each one making some concession for the general good. If some one has something better as a basis to start with, I shall be not only willing, but glad to see this thrown aside and the better taken in its place. But *something* must be taken as a basis. It will not do for each one to offer the system that exactly suits him. We'll not get on very fast in that way.

If no better basis is offered than the one I have given, then let each one look it over and see, not what changes must be made to make the plan entirely acceptable, but, rather, let him see what is the least change necessary to make him willing to agree to the system, taking into account what others, as well as himself, may desire.

I see I have made the impression that W. C. Frazier's system suits me better than all the rest. That is hardly true, as will be seen from the system I have attempted; but I like his idea of having a system of grading which does not involve the honey itself, leaving that as a separate classification. Others had the same idea, but did not bring it out so clearly, or, at least, it did not strike me so.

The names of the grades are simple. They are easily understood, both by the producer and consumer. And I don't know why the consumer shouldn't fully understand just what they mean. There will never be a great overstock, I fancy, of honey classed as *fancy*. Perhaps it is drawing the lines rather tightly to say, "All cells sealed." Possibly a certain number of cells next the wood ought to be allowed unsealed. I think very few have been in the habit of sorting out

their best honey into this grade; but the man who puts several tons on a large market could select a number of crates for which an extra price could be obtained, and that without lowering the price of his No. 1 honey.

The No. 1 contains the bulk of a good bee-keeper's crop, and on that account it is the most important of all. The only bee-keeper with whom I have had a chance to talk the matter over, objects to my putting down "ten cells" as the limit allowed unsealed on the poorer side of a No. 1 section. But it seems to me that, so far as possible, everything should be very exact. If such a phrase as "only a few cells" should be used, then some would understand that to mean three, and some fifty. If ten isn't the right number, then make it five, twenty, or whatever is thought best; but don't leave it indefinite. The term "slightly discolored" is indefinite, and on that account objectionable, but I don't see how to better it easily.

In No. 2, not more than one-fourth of the total surface must be left unfilled and unsealed. Possibly it is not necessary to say three-fourths of the surface must be filled and sealed, for it will hardly be sealed without being filled. As to the remaining fourth, it may be filled and not sealed, or there may be empty comb or entire vacancy to the amount of one-fourth of the section. Of course, the unsealed part might be on one or both sides. That is, one side might be all filled and sealed, and the other side half sealed, or each side might be three-fourths sealed, or one side may have anywhere from the half to the whole of it sealed, only so that there shall be enough sealed on the other side so that the sealing on both sides taken together shall be as much as three-fourths of the total surface of both sides added together.

The difficulty of adopting a system of grading that shall be satisfactory to all is greater than at first anticipated, so that I do not wonder that some have little faith that any one system can be agreed upon. I think that all agree that the ground of the difficulty lies in the fact that different localities produce different kinds of honey, and each locality wants a system of grading that shall show no discredit upon the honey produced in that locality.

If I am rightly informed, the York State men have no difficulty in agreeing upon a system that suits them; so can the California men; so can the Mississippi Valley men. Now, suppose white clover is the only kind of honey pro-

duced all over. There would probably be no greater difficulty in settling upon a system acceptable to all. No. 1 white clover would easily be the same in York State or in Western Illinois; and then suppose that, all over the land, a second crop should be obtained from Spanish-needle. Would not all agree that a No. 1 Spanish-needle section should be just the same as a No. 1 white clover section, except that one was filled with white clover honey and the other with Spanish-needle? and the same way if all the different sources of honey ruled in every location. Now, if I am correct in this, then there ought to be no more difficulty in agreeing upon the grades, as things now exist; and then the only thing to add is, to say what kind of honey is contained—light, amber, dark or mixed.

If any one objects that light, amber, etc., are not distinctive enough, then there need be no difficulty at any time in specifying particularly any one class of honey. Indeed, I should expect that, in time at least, some few particular kinds of honey would come prominently to the front, and that possibly in some markets No. 1 Spanish-needle might be quoted higher than No. 1 light. But the great thing is, to agree upon the grades, to be alike applied to all kinds of honey, and I have some hope that we may reach that. C. C. MILLER.

J. E. Crane—Commission men are opposed to a fancy grade, because it detracts from the sale of the lower grades. Dealers say they have no trouble in selling honey even if the "fancy" grade is mixed with the No. 1. Some people are very particular. They want a nice article, and the dealer gives it to them. Others are not so particular, and they get the combs that are not quite so nicely finished.

W. Z. Hutchinson—I suppose it is upon the same principle that my grocer never sends me any poor butter, yet I pay no more for my butter than the man who is not so particular.

A. N. Draper—These extra-nice people have an extra-nice pocket-book, and they don't object to having it squeezed. I say the fancy grades of honey should be sold for a fancy price.

Frank Benton—I think Mr. Draper is correct.

R. F. Holtermann—Taking one year with another, what proportion do you suppose would rank as "fancy" according to the exact gradings that have been published?

Frank Benton—I do not know. Perhaps not more than 5 per cent.

J. E. Crane—It has been a great disappointment to me that I cannot grade my honey as Dr. Miller proposes to have it graded, but the commission men have always objected. They say, put your fancy and No. 1 all in one grade. If you don't, you will not get much more for the small amount of fancy honey, while the No. 1 will suffer more by the comparison than you will gain by the little extra that you get for the small amount of fancy that you may have. I have never been able to get more than a cent a pound more for the fancy than for the next lower grade; nor more than two cents more for my No. 1 than for my lowest grade.

R. F. Holtermann—I think too much stress is placed upon the few unsealed cells. There is more difference in regard to travel stain.

A. C. Hoopes—I am a dealer here in Washington. I have handled honey here for 20 years. I am not in favor of having a superfine, extra, fancy grade. I would have no pollen in the best grade. No section should be less than three-fourths full.

A. N. Draper—There is the point of pollen. I think that two cells of pollen in a section ought not to throw it over into the lower grade.

J. E. Crane—I think it a little severe that a cell or two of pollen should condemn a section to a lower grade.

H. Segelken—An occasional cell of pollen, or an unsealed cell, ought not to throw a section into a lower grade.

R. F. Holtermann—Upon which would you draw the line closer, pollen or cappings?

H. Segelken—On cappings.

It was in this way that the discussion ran on for an hour or two, and the result was that only two grades were adopted, and they were the first two grades of the grading adopted a year ago at Chicago. The wording was slightly changed in the first grade, allowing sections with the row of cells next to the wood to be unsealed in the fancy grade. The grades as now adopted and approved by the North American, are as follows:

Fancy.—All sections to be well filled; combs straight, of even thickness and firmly attached to all four sides; both wood and comb to be unsoiled or travel-stained, or otherwise; all cells sealed except the row of cells next to the wood.

No. 1.—All sections well filled, but with combs crooked or uneven, detached at the bottom, or with few cells un-

sealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to the above, honey is to be classified according to color, into *light, amber and dark*. For instance, there will be "fancy light," "fancy amber," and "fancy dark." "No. 1 light," "No. 1 amber," and "No. 1 dark."

While there are some points in the above that are not covered, that of pollen, for instance, and some other omissions, I think it the best plan that has yet been approved by the North American.

Spraying of Fruit-Trees.

This subject was again brought up. A. N. Draper thought something might be done through the manufacturers of pumps and spraying outfits. Get them to recommend in their instructions that spraying during bloom was of little benefit in any case, and in most instances of no benefit, while it was almost always an injury to bees, which are of great benefit to fruit-growers.

Frank Benton—I doubt if we could get the manufacturers to do this. They wish to sell pumps, and have no desire to put any restrictions upon their use. It is well-known that spraying for the codling-moth does no good until the little apples are formed, and people should be informed upon this point. The Department of Agriculture has a Bulletin upon this point, and it is sent free to all applicants.

R. F. Holtermann—We found it impossible to educate people fast enough, so we have secured the passage of a law forbidding the spraying of trees while in bloom.

Upon motion, a committee consisting of Frank Benton, A. N. Draper and J. E. Crane, was appointed to draft resolutions upon this subject. Later the committee made the following report, which was adopted:

WHEREAS, Strong evidence from various portions of the country has been presented to the North American Bee-Keepers' Association at several of its meetings, to the effect that the spraying of fruit-trees while in bloom has resulted in serious destruction to bee-life through poisoning; and,

WHEREAS, Since the complete pollenization of the fruit-blossoms is of the greatest importance to the fruit-grower himself, and therefore the destruction of the bees is not only a loss to the bee-keepers, but also a great one to fruit-growers; and,

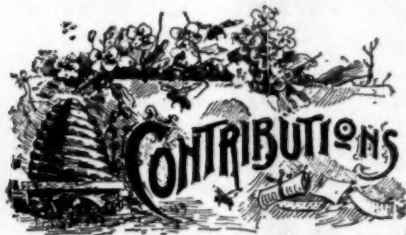
WHEREAS, The possible benefits to be derived by the fruit-grower from spraying during the time of blooming are slight at most; therefore, be it

Resolved, That the North American Bee-Keepers' Association recommends the apiarian societies of the various States to memorialize their respective legislatures to enact such laws as shall forbid the spraying of fruit-trees during the time of blossoming.

Respectfully submitted,

FRANK BENTON, }
A. N. DRAPER, } Com.
J. E. CRANE. }

(Continued next week.)



"Where Are We At" on the Adulteration of Honey?

Written for the American Bee Journal

DR. C. C. MILLER.

In the report of the Michigan State Convention, on page 16, is found the discussion upon the adulteration of honey. More than three-fourths of the space given in the report to this discussion is occupied by Mr. Heddon, and as his name is signed to his argument, it is reasonable to suppose that he is correctly reported. His remarks can hardly be held up as a model for fairness and freedom from sophistry.

His first utterance is, "There is no trouble in enforcing the law against murder." Isn't there? Does every murderer suffer the full penalty of the law? A friend of mine was sitting quietly in front of his home in Chicago in broad daylight, when in cold blood a man came up to him and shot him dead. It was a deliberate, premeditated murder, yet the murderer got off scot free, and has defiantly walked the streets of Chicago for years. If I am not mistaken, statistics show that about one murderer in fifty suffers the full penalty.

Then Mr. H. goes on with the general statement, "There is no trouble in en-

forcing any law that the people care enough about to have it enforced." I don't believe that is true, and I don't think he will believe it after he has time to think it over; but if it be true, it is a very encouraging thought for those who want rigid adulteration laws, for I think there are in the ranks of bee-keepers a sufficient number of the people who "care enough about" the matter.

Mr. Heddon says the public "don't know nor care whether honey is adulterated or not." Then why all the anxiety and trouble about the Wiley "pleasantry?" Why did the papers take it up and circulate it so industriously? Was it all a mistake on the part of bee-keepers to believe that the mere report of adulteration, false though it was, injured decidedly the sale of honey? Why do the public take so much interest in the Paddock Pure Food Bill? Don't you fool yourself, Bro. Heddon. The public do care, and care a great deal.

Mr. Heddon says: "I think that the adulteration of honey has never injured bee-keeping; that it has rather been a benefit." The reason given is that the adulterators "made a market for our strong fall honey that otherwise would have been scarcely salable; they pushed its sale, and kept the markets supplied, and I say they have not injured the bee-keeper nor the public." Even if an outlet should thus be made for the dark honey, which may lack proof, what is done with it when adulterated? It is made into lighter honey by being mixed with glucose, if I understand Mr. Heddon correctly, and so the market for light honey has just this much more to compete with. Is this a benefit to bee-keepers?

If adulteration is wrong, Mr. Heddon thinks we ought to attack it where it is doing more harm—in cane syrups and confections. He seems for the time to forget that bee-keepers are looking out for their own interests. I'm not so much interested in the adulteration of coffee, because I don't raise coffee, and I do produce honey. For the same reason the adulteration of honey comes closer home to me than that of syrups and confections.

"Now if we are going to fight adulteration, let us decide why we fight it," says Mr. Heddon, but he doesn't do very much deciding. I think the mass of bee-keepers have decided that they want to fight it for the simple reason that it hurts their market by increasing the supply, and also by making the public suspicious of the genuine article.

"A honey-producer with the right kind of bees and appliances and management, can always produce honey cheaper than he can buy glucose," says Mr. Heddon. It is to be presumed that he has the right bees, appliances and management, and if he can always produce honey cheaper than he can buy glucose and then sell it for two or three times as much, he is hardly wise to be fooling away his time in the publication of a newspaper instead of expanding his honey-production. Guarantee for a series of years to furnish a sufficient amount of honey at 50 per cent. advance on the price of glucose, and I think quite a few bee-keepers would prefer to buy rather than to produce their honey.

"No one is practicing it except the city dealers," Mr. Heddon says. How does he know that? And if adulteration is the nice and good thing that Mr. Heddon represents, why should the bee-keeper leave it to the city dealer? Can't he mix glucose and honey just as well as the city dealer? Even admitting that he can produce honey for less than he can buy glucose, could he not, the past season, have made quite a nice little extra profit by adding to his honey one-third glucose, and then selling at the price of honey?

Mr. Heddon winds up with the statement: "One or two good seasons will stop adulteration so completely that it will amount to nothing." Not a very reassuring statement, certainly. For I suppose that means that a big crop would bring down the price of honey to that of glucose, in which case I suspect a good many would leave the business of producing honey. Just so long as there is a profit in mixing glucose with honey, you may count that adulterators will continue their work, big crop or no big crop, if they can safely do so. Just for this reason an earnest effort is now being made to enlarge the scope of the Bee-Keepers' Union so as to prosecute adulteration, and if the effort is successful I am sure Mr. Heddon will have the good sense to resign the office of President, for it would hardly be in keeping for the President of the Union to take any part in the prosecution of those whom he esteems benefactors of the members of the Union.

The strangest part in the whole affair is the reported reply of Prof. Cook, "Mr. Heddon may be right." I don't believe he said it. At least I don't believe he meant it in the broad sense in which it appears, as applying to all that Mr. Heddon said. Even if glucose may

be entirely pure and good, it is a dishonest act to palm it off on the public as honey. But you'd better see and taste for yourself, Professor, those grades of glucose that are really wholesome before you make any apparent concession. And I very much doubt if you find them better than what you tried and pronounced "not good." But whether good or bad, adulteration is still adulteration, and it will be a "cold day" for us if the man who has been the leader in saying brave words against it shall have said his "last word against adulteration."

Marengo, Ills.

How to Catch and Kill Skunks that Molest Bees.

Written for the American Bee Journal

BY H. C. FABNUM.

On having my bees disturbed nearly every night during the fall and early part of the winter by a digging at the front of the hive, and as I was not thoroughly acquainted with the nature of affairs, and being no tracking on snow, so I could see any tracks, I set a steel trap at the entrance of a hive where the pawing was done most, and concluded to have the "chap" that was disturbing my little friends.

Behold, the next morning I had a Mr. Skunk fast. Now I had him, but the next thing was to kill him without scenting everything with his powerful perfume. It was about that time I felt the need of some kind of literature in which I might learn how to kill a skunk and not get killed myself.

But fortunately I had a kind neighbor who possessed the very kind of knowledge which I wished to know, so I hastened to him and told him what kind of a trap I had got into. I asked him for relief, which he granted me at once, by arranging a long pole with a hook at the end to pull the stake to which the trap of the skunk was attached, and led Mr. Skunk to the river, where he drowned him, which proved a very successful way, as it left no scent behind at all.

Since then I have caught quite a number in the same way, the past month affording sufficient tracking snow to follow the little "chaps" home. Of late I have not been troubled any with skunks, and with the exception of a few colonies the skunks raided, my bees are all in good condition, numbering 120 colonies, with sufficient stores for winter.

SUGAR SYRUP FOR WINTER STORES.

The past fall I fed quite a quantity of sugar syrup, which I think is far ahead of dark honey for wintering purposes. Some colonies have scarcely anything but sugar syrup stores, and are in full better condition than those containing all honey.

If nothing prevents, another fall, I shall extract from the brood-chamber at the end of the honey-flow, and feed sugar syrup in place of honey, which, in my opinion, will be better for the bees to winter on, and more profitable to myself.

Transit Bridge, N. Y.

Divided Colonies as Good as from Natural Swarming.

Written for the American Bee Journal

BY J. L. WOOLDRIDGE.

I noticed on page 790 (1892) the question asked, and answered by several prominent bee-men, as to whether or not we can have divided colonies as strong as natural swarms. It seems that the most of those who answered the question seemed to think that we could not. Well, I did not answer the question, and if I had been called upon I suppose I would have left it to somebody more competent than I to answer; but as it was a Texas friend that asked the question, may be my experience will be of interest to him. We are in about the same climate, and I think his bees ought to do as well as mine, that is, if he is in as good a location as mine.

Last spring I had only 7 colonies, and I divided them early in the spring, and took about 800 pounds of what I call first-class honey, and increased from 7 to 20 colonies, all of which are in fine condition for winter.

Now I will tell how I divided, and how the best colony built up, swarmed and stored surplus honey after it was divided, while there were several others that did nearly as well.

Late in the fall of 1891, I purchased some select-tested Italian queens which I introduced successfully. I divided them some time during March the following spring.

Of course I will tell about the one that I think did the best. I moved this colony just a little to one side, then put an empty hive by it. I turned the entrance a little to the right of what it was before, and turned the new one about as

much to the left, with the rear ends touching, and the front about 12 or 15 inches apart. Then I took about half of the comb, honey and brood, and put them into the empty hive, leaving the queen in her own hive, and gave the queenless colony a few the most bees, and plenty of eggs to rear a queen from, I left the hives in this position a few days, then turned the backs a little from each other, so as to make them front in nearer the same direction. In a few days I did the same thing again, and so on until they were fronting the same.

Now, I had 2 colonies side by side, both working as if they never had been divided. Of course they were both weak, but the queenless colony built five queen-cells, and instead of hatching one queen and tearing down the other cells, as I expected, she swarmed with a virgin queen, but some returned to the old hive. I went and cut out, as I thought, all the cells that were left, but overlooked one, and the next day they swarmed again. I would have put them back, but thought they were determined to swarm anyhow, and may be would run away the next time, and being from one of my finest queens, I did not care if they run for increase, and not much for honey.

So I hived them on one frame of honey and one of brood. This little swarm filled ten frames $13\frac{1}{2} \times 9$ inches, and stored about 100 pounds of surplus honey, which was the most I got from any one of my colonies. The one this swarmed from (which was the queenless one after dividing) built up the same as the other one, and stored about 80 pounds of surplus honey.

Now, I come to the colony with the old queen, that filled her hive, threw off a fine swarm, and stored about 80 pounds, and I took about 40 pounds from her swarm.

Now I have 4 colonies, all of which have plenty of stores for winter, and I took 300 pounds of first-class honey, which I sold for a good price, that is, as much as I wanted to sell.

These queens that I spoke of were the first ones I ever saw shipped through the mails, or introduced in new colonies, and I never saw a colony divided before I divided mine, and never have seen one divided since. If some one can give a better plan to divide, it will be kindly accepted. I will give it a test next spring, and satisfy myself as to which is the best here in Texas—dividing or natural swarming.

Ennis, Texas.

Various Bee-Notes and Comments on Things.

Written for the American Bee Journal

BY O. P. MILLER.

On page 822 (1892), Mr. Demaree says that bees can only take food in a liquid state, which I believe. If this is so, what will we do with the statement from reliable people that I have heard say, and I have read it in bee-literature, that a boiled chicken put into the hive of a starving colony they will devour greedily, and winter on it? I have heard an old, reliable man say this. I also heard the same man say that he had wintered his bees on corn bread by baking a large loaf, then split it in two, and while hot put molasses on it, and by the next morning it was all devoured by the bees.

My bees seem to be doing well in their winter quarters in the cellar, where they have been ever since Nov. 1st.

I am much pleased with the AMERICAN BEE JOURNAL, and with its new dress. I think that the one article, on page 823, is worth the subscription price for one year, although I have been following the plan there suggested, yet I have gathered some new ideas from the article.

My report for the past season, though not a good one, is as follows:

I had 40 colonies, spring count, took about 2,300 pounds of honey, most of it being white clover and linden. I sold (and gave away) \$160 worth up until now, and still will sell some more. I increased by natural swarming to 58 colonies, nearly all in good condition for winter.

I find no trouble in selling my honey at an advance of from 2 to 5 cents more per pound than that put upon the market. I also find no trouble in selling to parties who once purchase of me. My rule is to sell none but the best article of both kinds, and guarantee every pound of it. Some ask, "Must we keep it in the cellar, where it is cool?" I answer no; put it in the pantry or kitchen, and if it sours, let me know, and I will give you two pounds for every one that sours. I have been in the market for 6 or 8 years, and never had to replace a pound of sour honey, nor have I ever had to carry any over until the next year. I sell my honey to consumers, and take it to their houses.

I plant buckwheat for my bees, and this year, they have stored quite a good amount of honey from this plant, and I got a nice lot of the grain, which

I consider all clear gain, as I got enough of the honey to pay for the seed and sowing, and the patch was too wet in the forepart of the season to farm, and would have grown up in weeds had it not been for the buckwheat. I can nearly always find some such patch on my farm. By planting the buckwheat, the ground was in fine order, and is now in winter wheat. I intend to sow a small piece of stumpy land in the spring to buckwheat early, so as to come in between white honey and fall honey; about that time it is generally dry here, and no honey, but last year I drilled in a row in my garden, and the bees worked on it at that time of the year.

I received a circular, a few days ago, advertising (to me) a new variety of clover, called, I think, "purple clover." The blossom is long, and the plant seems to be quite full of bloom. They want \$10 per bushel for the seed, or 20 cents per pound. Does any of the readers of the BEE JOURNAL know anything about this new plant?

Glendon, Iowa, Dec. 27, 1892.

CONVENTION DIRECTORY.

Time and place of meeting.

1893.
Jan. 28.—Ontario Co., at Canandaigua.
Miss Ruth E. Taylor, Sec., Bloomfield, N. Y.
Feb. 7, 8.—California, at Los Angeles.
John H. Martin, Sec., Redlands, Calif.
April 5, 6.—Texas State, at Greenville, Tex.
A. H. Jones, Sec., Golden, Tex.
May 4.—Allegany Co., at Belmont, N. Y.
H. C. Farnum, Pres., Transit Bridge, N. Y.

NOTE In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—Dr. C. C. Miller....Marengo, Ills.
SECRETARY—Frank Benton, Washington, D. C.
TREASURER—George W. York...Chicago, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon...Dowagiac, Mich.
SECY AND MANAGER—T. G. Newman, Chicago.

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Bee-Keeping Improves the Health.

I have 15 colonies of Italian bees in winter quarters, put in on Nov. 19th with plenty of honey and strong with bees. I commenced the spring of 1892 with 7 colonies of Italian bees, they increased to 18 colonies, and gave me 450 pounds of surplus honey, besides having plenty to winter on. My health is poor, but it helps me to work among the bees, and I long for spring to come so that I can be among my pets again.

I could not keep bees very well without the BEE JOURNAL. It is a welcome visitor 52 times a year.

JESSE B. LEWIS.

Weston's Mills, N. Y., Jan. 13, 1893.

Wintered Without Any Loss.

Last winter I wintered 100 per cent. of my colonies, 12 in all, increased them to 18, and took 360 pounds of comb honey, mostly in one-pound sections. Every colony had plenty of honey for winter, viz.: from 35 to 75 pounds each. Perhaps I should have extracted part of it from them, but I didn't have an extractor, or the time, but expect to give them more attention this year.

G. W. BELL.

Bell's Landing, Pa., Jan. 9, 1893.

Experience in Wintering Bees.

Having bought 17 colonies of bees, I will give the readers of the BEE JOURNAL the benefit of my experience in the wintering of the same. About Nov. 15, 1892, these bees were packed in clamps with chaff and straw packing about 6 inches in thickness on the sides, and one foot on top. They were left in the open yard where the hives were in the summer, and at present they appear to be in good condition. The hives were covered with gunny-sacks filled with chaff

about 6 inches in thickness, before the loose chaff and straw was put on. Through a mistake made in leaving the oil-cloths (that had been used to cover the hives a year ago last summer) on top of the hives when they were put in in the fall of 1891, we lost the greater part of them last winter. Starting with only 4 colonies in the spring, we put in the 17 for the winter. With the exception of the loss last winter, as mentioned, we have never had any trouble in wintering. I expect to continue in the business from this time on, and am glad to acknowledge the help I derive through the AMERICAN BEE JOURNAL.

MRS. CHARLOTTE MARDEN.

West Weston, Wis., Jan. 12, 1893.

Bees in Good Condition.

Bees did very poorly the past year. All the surplus we got was from the first cutting of alfalfa, after that the grasshoppers destroyed most of the bloom. I got about 10 pounds of honey per colony. Some got none. Bees are in good condition for winter. I have 100 colonies.

F. H. McDONALD.

Star, Idaho, Jan. 2, 1893.

Most Open Winter Ever Known.

Bees have wintered well here so far. We are having the most open winter here that I have ever known. There is no snow, and the ground is dry in some places.

R. T. RHES.

View, Utah, Jan. 13, 1893.

Some Experience in Bee-Keeping.

I started last spring with 40 colonies, spring count, and let them increase to 53. I put sections on 38 of that number, and took about 700 pounds of honey altogether. About 60 pounds of it was extracted. I put my honey in groceries to sell, and it was retailed at 20 cents; that gives me about 16 or 17 cents a pound. I pay 15 or 20 per cent. for selling. I believe I can say that I hear of no complaint from any, but that my honey is very good. Even those that bought of me in 1891, with some honey-dew in, bought of me again the past season. I put into winter quarters 45 colonies, having lost two, one with the diarrhea, and the other became queenless. I sold three, and that left me 40 colonies. My health has been very poor all summer and fall, although some better now. In view of

the condition of my health, I sold 50 colonies of my bees for fear I would not be able to care for them another year, but if my health keeps on getting better, I may stock up again in the spring. It is the only thing that I have worked at for six years, and made more in the last year than in any two years before. The reason is, I understand it better. Bee-keeping is not all learned in one or two years, but it takes one's lifetime, almost, to make a success of the business. I have learned a great deal from the AMERICAN BEE JOURNAL, and may it live long to educate the people in the science of handling bees, for I know from my own experience that there are only a few that will make a success at the business. One has to go at it with an eternal vigilance or grit, to make anything out of it. IRA ADAMSON.

Winchester, Ind., Jan. 6, 1893.

Brood-Chambers Well Filled.

I lost 15 colonies out of 21 last spring, and the others were reduced so low that they hardly built up. When the white clover blossomed they worked on it very little. I had 5 late swarms, and as I wanted the bees I did not put the sections on until late, and only got 10 to 12 pounds of honey in partly-filled sections. The late honey-flow seemed to be better, and the brood-chambers were well filled with honey and bees. My farm crops were on a par with the bees—not one bushel of apples on some 90 trees, and very little small fruit. EDWARD H. BEARDSLEY.

Deer Park, Ills., Jan. 9, 1893.

Bee-Keeping in Tennessee, Etc.

My neighbors keep bees. I try to keep bees. My neighbors don't read any bee-papers. I read all that I can get hold of, and wish for more. My neighbors don't wish for anything in the way of bee-literature, because they think they are versed in apiculture, and the old box-hive thrown in. I have 14 bee-keeping neighbors within four miles of me representing 72 colonies of bees. I represent 25 myself—in all, then, 97 colonies, all black bees except my own. My bees were housed up from November until Dec. 31st, when they had a good flight. The weather has been very cold here, the mercury standing at 10° to 50° above zero for about three weeks. On Dec. 31st it was up to 60° above. I do not see why the bee-keepers of Tennessee don't have associations and con-

ventions, and so on. Are they not as able as the bee-keepers of other States? or is it because they don't want anything of that kind, or don't care?

I send a stalk of clover that I found last summer. Please tell what kind it is. A. C. BABB.

Greenville, Tenn., Jan. 2, 1893.

[It is Alsike clover, one of the best honey-yielding plants, as well as being excellent for feeding stock.—ED.]

Too Rainy—Too Cold—No Nectar.

The honey season of 1892 was the poorest we have had for the past eight years in this locality. Last spring I put 24 colonies of hybrid bees on the summer stands, and all were in good condition, and with plenty of honey to start—from 15 to 18 pounds per colony. They did not gather one pound of comb honey, and most of the colonies not enough stores for winter. The cause was too much rain, and too cold in the earlier part of the summer. There was no nectar in the flowers, either.

C. F. PRUSSING.

Fountain City, Wis., Jan. 4, 1893.

Poor Season—Cold Weather.

This has been the poorest season for years in Central New York. But few have obtained any surplus at all. I commenced the season with 24 colonies, increased to 36, and obtained 600 pounds of comb honey, mostly from buckwheat and golden-rod. Basswood blossomed profusely, but yielded nothing. I am wintering 9 colonies in chaff hives, and 27 colonies are in the cellar—all seem to be doing well. The weather has been very cold so far, temperature being below zero a number of times.

F. F. HARRINGTON.

Lena, N. Y., Jan. 4, 1893.

Bountiful Crop of Honey Secured.

The season of 1892 will long be remembered by me for its bountiful honey-flow. Forty-six colonies, spring count, gathered 4,342 pounds of honey, all extracted but about 75 pounds. There was a continuous honey-flow, more or less, during June, July and August, but September was a surprise, being cold and wet, so that I had to double up a few colonies that I had expected to build up for winter, and feed back about 300 pounds of honey to put my bees in a

somewhat reliable condition for wintering. My increase was to 98 colonies—52 colonies increase, and 4,000 pounds of honey from 46, spring count, ought to satisfy (if it is in our nature) a fellow even if he is in California. I have inquired of other bee-keepers in this county (Manistee) as to their crop, but they do not report anything extra.

WALTER HARMER.

Manistee, Mich., Jan. 16, 1893.

Success in Wintering Bees.

I have as good luck in wintering bees as most bee-men. I have a cellar 18x28 feet, all brick, 13 inches thick, with three windows in it. I put my bees into this cellar, and I keep the east window out all winter, but covered with boards. I have one chimney in the center of the house, and it is built from the bottom of the cellar. There are two holes in the chimney in the cellar, and a part of the time I keep the holes open, and the draft draws fresh air from the open window. My bees seem to do well. I have 55 colonies. I have kept a few bees for 15 years. I also give the bees upward ventilation, leave off the honey-board, and keep the cellar cool and dry.

C. W. BLAKLEY.

Pre-emption, Ills., Jan. 4, 1893.

Milkweed and Buckwheat Honey.

I began the season of 1892 with 27 colonies, 7 of which were in such poor condition that they yielded neither honey nor increase. I secured 2,000 pounds of milkweed honey, and about 200 pounds of buckwheat honey—extracted. I had 100 one-pound sections of comb honey, all of which, with 40 pounds of extracted, came from one colony. I have 34 colonies in the cellar, and 4 in a snow-drift. Basswood produced no honey last year.

CLARK A. MONTAGUE.

Archie, Mich., Jan. 12, 1893.

Sow Alsike Clover for Honey.

The last was a poor season in this vicinity. I had 38 colonies in the spring, increased to 58, and had 400 pounds of comb honey. The honey was stored from Alsike clover, as there was no surplus before the clover was in blossom, and none after it was out of blossom. White clover was quite plentiful, but bees worked on it very little. I think

that Alsike clover is the surest to yield honey of any plant I know, and it is good for hay or pasture, when mixed with timothy; but for seed it must be sown by itself, as you cannot separate the seed. I have a new stocked piece of 13 acres, and there is as much more in the immediate vicinity, so I am expecting a crop of honey next season.

I. W. ROLLINS.

Elgin, Minn., Jan. 14, 1893.

Still Likes Bees and the Bee Journal.

I must have the BEE JOURNAL while I am able to care for the bees. In a few days I shall be 84 years old, but the bees interest me as much as ever. I have had every number of the BEE JOURNAL since it became a weekly. I could not be comfortable without it.

L. EASTWOOD.

Waterville, O., Jan. 10, 1893.

Stored Only Enough for Winter.

I took my first swarm from a tree late in the fall of 1891, and I fed them about 35 pounds of sugar syrup, besides the brood-comb that I got out of two other trees. They wintered in good condition in the cellar, and last season they gave me one large swarm, but quite late, so I fed them a little. I think they are doing well, but I don't know, as I cannot handle them very well. It has been a poor year, for bees here stored only about enough to winter on.

Huntington, Vt. W. E. MARTIN.

Prefers Double-Walled Chaff Hives.

In 1892, from 48 colonies, spring count, I got 400 pounds of comb honey and 110 pounds of extracted. This was my first season, and it rained every day in May and June, excepting three days. I examined my bees on July 3rd, and some were ready to starve, but they picked up after that. I have now 76 colonies in good condition for winter. My hives are all double-walled chaff hives, made by myself. I have yet to lose the first colony in those hives. I prefer them to all others. I have been keeping bees for 7 years.

FRED STREHLE.

Delhi Mills, Wis., Jan. 16, 1893.

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Premium offer on page 101?



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Wallace Porter Dec93
Suffield, Portage co, Ohio

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Doolittle's Queen-Rearing

book should be in the library of every bee-keeper; and in the way we offer to to give it, there is no reason now why every one may not possess a copy of it. Send us one new subscriber for a year, and we will mail the book to you bound in paper, as a present.

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Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line**, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the *BEE JOURNAL*. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

"Bees and Honey"—page 101.

Honey & Beeswax Market Quotations.

The following Quotations are for Saturday, January 21st, 1892:

CHICAGO, ILL.—There are occasional sales of best grades of comb honey, but the retailers are not yet sold out on supply laid in before the holidays. Prices are a little easier, especially on that which will not grade "fancy"—such brings 17@18c., and other grades 12@16c. Extracted, 6@9c., as to quality.
Beeswax—22@25c. R. A. B. & Co.

CHICAGO, ILL.—Fancy stock is very scarce, with plenty of inquiry, with good prices offered for same. It sells readily at 18c.; No. 1 comb, 16@17c. Dark sells slow. White extracted, fair supply, with good demand at 8½; dark, 6@7c. Beeswax—23@25c. J. A. L.

CINCINNATI, OHIO.—Demand from manufacturers, for extracted honey, was slow for the last few weeks, while there was, and is still, a fair demand from consumers for family use. There is no choice comb honey in the market. Best white comb brings 14@16c. Extracted honey brings 6@8c.
Beeswax—Demand fair, at 23@25c. for good to choice yellow. Supply good. C. F. M. & S.

NEW YORK, N. Y.—Demand for comb honey is very light. White fancy stock is well cleaned up. The market is well stocked with off grades and buckwheat, and prices are irregular. Extracted is in good demand and stocks are light. We quote: Basswood and white clover, 8@8½c.; buckwheat, 6@6½c.; Southern, 7@7½c. per gallon.
Beeswax—25@27c. H. B. & S.

SAN FRANCISCO, CALIF.—Choice extracted is scarce at 7@7½c., and demand heavier than supply. Choice comb is not scarce at 10@12c., according to quality. 1-lbs. Beeswax is neglected at 22@23c. S. L. & S.

BOSTON, MASS.—Comb honey is selling slow, very much slower than we like to have it, and it is our experience that when we start honey in at a high price, it sells hard right through the season. We quote our market nominally at 17@18c. for best white honey, 1-lb. combs. Extracted, 8@9c.
Beeswax—None on hand. B. & R.

KANSAS CITY, MO.—Demand good, supply very light. White 1-lbs., 16c. Extracted, 6@7c. No beeswax on the market. H. & B.

MINNEAPOLIS, MINN.—The market is good. We quote: Fancy white clover 1-lbs. sell fast at 18c.; 2-lbs. 16@17c. Buckwheat, comb, 13@14c. Extracted, in barrels, 7@8c.; in 5 or 10 lb. kegs., 9@10c. J. A. S. & C.

KANSAS CITY, MO.—Receipts and stocks very light, demand good. We quote: No. 1 white 1-lbs. 16@17c.; No. 2, 14@15c.; No. 1 amber 1-lbs. 15c.; No. 2 amber, 10@12c. Extracted, white, 7@7½c.; amber, 5@6.
Beeswax—20@23c. C-M. C. C.

ALBANY, N. Y.—Our honey market is slow on account of cold weather, but our stock was never so light as now. We have less than 50 cases of honey on hand, and only one barrel of extracted; when usually we have 1,000 cases in stock. For honey not granulated in comb, we quote: White (small), 15@18c.; mixed 13@14c.; dark, 10@11c. Large comb and double glass sell for 1 to 2c. less per lb. Extracted, white, 8½@9c.; amber, 7½@8c.; buckwheat, 7@7½c. H. R. W.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

R. A. BURNETT & Co., 161 South Water Street.
J. A. LAMON, 44 & 46 South Water Street

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN,
28 & 30 West Broadway.

San Francisco, Calif.

SCHACHT, LEMCKE & STEINER, 10 Drumm St.

Minneapolis, Minn.

J. A. SHEA & Co., 14 & 16 Hennepin Avenue.

Kansas City, Mo.

HAMBLIN & BEARSS, 514 Walnut Street.
CLEMOMS-MASON CO., 521 Walnut St.

Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway

Hamilton, Ills.

CHAS. DADANT & SON.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Convention Notices.

NEW YORK.—The 4th annual convention of the Ontario County Bee-Keepers' Association will be held in Canandaigua, N. Y., on Jan. 28, 1893. All are invited.
CHESTER OLMSTEAD, Pres.

East Bloomfield, N. Y.

CALIFORNIA.—The 2nd annual meeting of the California State Bee-Keepers' Association will be held in the Chamber of Commerce in Los Angeles, Calif., on Feb. 7th and 8th, 1892. Programmes will soon be issued, for which address,
JOHN H. MARTIN, Sec.
Redlands, Calif.

NEW YORK.—The next meeting of the Allegany County Bee-Keepers' Association will be held at Belmont, N. Y., on May 4th, 1893, in the Hotel Belmont. All bee-keepers are invited to attend and make it what it should be—an interesting meeting.
H. C. FARNUM, Pres., Transit Bridge, N. Y.

TEXAS.—The Texas State Bee-Keepers' Association will hold its 15th annual convention in Greenville, one mile north of the Court House, at the apiary of Mrs. Jennie Atchley, on Wednesday and Thursday, April the 5th and 6th, 1893. One of the biggest bee-meetings ever held in the South is anticipated. Everybody is invited. No hotel bills to pay. Come one, come all, and let us have a lovely meeting, and an enjoyable time. All bee-keepers invited to bring along something to exhibit.
A. H. JONES, Sec.
Golden, Texas.

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